REMARKS:

Claims 1 and 9 are amended; marked up versions of the amended claims are attached hereto pursuant to 37 C.F.R. § 1.121(c)(ii). Claims 1-6 and 9-15 are pending in the application. Reexamination and reconsideration of the application, as amended, are respectfully requested.

DRAWING OBJECTIONS UNDER 37 CFR 1.83(a):

The drawings were objected to under 37 CFR 1.83(a). The Examiner stated "the *vertical* and *horizontal* transport routes, pipette compartment with *spring-loaded v-shaped members*, and *means for positioning on the gripper mechanism*, in claims 1 and 9, 12-13 must be shown or the feature(s) canceled from the claim(s)." In addition, the Examiner stated, "although the reference number 11 does correspond to the spring-loaded v-blocks, the drawings do not show the invention as specified in the claims." In response, the Applicant amended Figure 10 to clarify the *horizontal* transport routes **14a**. The horizontal transport route **14a** allows the gripper mechanism to transport the reagent pack **1** horizontally. The gantry **5** with gripper mechanism 4 moves horizontally through a horizontal transport route **14a**, positions itself over the desired column of reagent packs **1**, and opens its gripping jaws **15**. Support for this feature may be found in the Applicant's specification at p.13, lines 3-5 and 22-23. The Applicant respectfully traverses the Examiner's other drawing rejections.

Applicant believes that all the claimed features are adequately shown in the submitted figures. For example, Figure 9 clearly shows the vertical transport route **16a**. The specification at p.13, lines 20-21, specifies that the *vertical* transport route **16a** allows the gripper mechanism 4 to transport the reagent packs **1** vertically within the storage nest **7** and between the storage nest **7** and the pipetting nest **9**. The gantry **5** with gripper mechanism **4** moves vertically through a vertical transport route **16a**. The reagent packs can then remain in the storage

nest or be transferred to the pipetting nest. The Applicant believes that Figure 9 clearly shows such *vertical* transport routes as **16a**.

The *spring-loaded v-shaped members* are also clearly shown in Figure 13 as **11**. The specification at p.13, lines 30-31 and p. 14, lines 1-2, provides that the pipetting compartment with *spring-loaded v-shaped members* **11** allows for engaging the pointed front end of the reagent pack **1** for its precise positioning. The *spring-loaded v-shaped members* **11** retain the reagent packs in a fixed position. The Applicant believes that Figure 13 clearly shows the *spring-loaded v-shaped members* **11** in their pipetting nest. A more detailed drawing is not required because spring loaded v-blocks are conventional features and well known to one skilled in the art.

Not shown in Figs

In addition, the Applicant believes that the figures submitted clearly show the means for positioning on the gripping mechanism. The specification at p.9, lines 19-26, provides that the *means for positioning on the gripper mechanism* **4** allows for positioning and positively retaining the reagent pack **1**. The preferred embodiment states that tapered holes **2** and **3** on either side of the reagent pack **1** provide a means for positioning on the gripper mechanism and positively retaining the reagent pack **1**. The complementary part of the means for positioning and positively retaining the reagent pack **1** is provided by pins **6** that are on the inner sides of the gripping jaws **15** (p. 10, lines 1-6). The Applicant believes that Figures 1, 2, 3, 4, and 5 clearly show the *means for positioning on the gripper mechanism* **4** features described in the Applicant's specification (p. 9, lines 19-26 and p. 10, lines 1-6). Figure 1 shows two tapered holes **3** located at one outer side of reagent pack **1** as well as the gripper mechanism **4**. Figure 4 reveals the third tapered hole **2** that is on the other outer side of reagent pack **1**, the gripping jaws **15**, one of the three pins **6**, and the gripper mechanism **4** that is on the gantry **5**. Figure 3 reveals one of the two pins **6** that go into tapered holes **3** and the pin that goes into tapered hole **2**. Figure 5 reveals the gripper mechanism that has moved horizontally (relative to Figure 4) in order to grip reagent pack **1**. Therefore, it is evident that the figure have shown the *means for positioning on the gripper mechanism*.

Not shown at all

Not tapered holes in any of Figs

In view of the foregoing, Applicant respectfully submits that the drawings adequately show all the claimed features of the above discussed elements and withdrawal of the rejections to the drawings is respectfully requested.

CLAIM OBJECTIONS:

Claims 1 and 9 stand objected to due to informalities. In response, the Applicant amended claims 1 and 9 to correct the informalities as suggested by the Examiner.

CLAIM REJECTIONS UNDER 35 U.S.C § 112:

Claims 1-6 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The Examiner stated "claim 1, paragraph a, line 2, the recitation that an element is 'sufficient' to perform a given function is not a positive limitation but only requires the ability to so perform." In addition, the Examiner stated "the terms 'wide' and 'narrow' are relative terms which renders the claim indefinite." In response, the Applicant amended claim 1 to specify that each reagent pack has an elongated body that has "thickness that is sufficient to accommodate said well." In addition, the Applicant amended claim 1 to specify that the middle portion is wider than "the front and rear portions." Applicant believes that the amended claim overcomes the rejections under 35 U.S.C § 112 second paragraph. Withdrawal of this rejection is thus respectfully requested.

CLAIM REJECTIONS UNDER 35 U.S.C § 103:

Claims 1-6 and 11-13 are rejected under 35 U.S.C. §103(a) as being unpatentable over Cohen et al. U.S. Patent No. 6,293,750 B1 (the '750 patent) in view of Anami U.S. Patent No. 5,585,298 (the '298 patent) and Styllie et al. U.S. Patent No. 5,985,214 (the '214 patent). Applicant respectfully traverses this rejection.

Claim 1, as amended recites:

A transporting and storing system used in conjunction with an immunodiagnostic instrument, comprising:

a. a multiplicity of reagent packs, each having an elongated body with at least one well, the elongated body having thickness that is sufficient to accommodate said well and a slim profile with a middle portion, a front portion with a pointed front end, and a rear portion with a rounded rear end having two generally opposite outer sides wherein the middle portion is wider than front end and rear portions;

b. a gantry mounted on a rack structure and movable horizontally for carrying a gripper mechanism which is vertically movable on the gantry and horizontally moveable with the gantry, the gripper mechanism having a pair of generally oppositely disposed and synchronically movable gripping jaws each having an inner side for engagement with said outer sides of said reagent pack;

c. a power assembly for actuating the respective movement of said gantry, said gripper mechanism and said gripping jaws;

d. a storage nest having a multiplicity of compartments aligned in vertical columns and horizontal rows, each adapted for storing one of the respective reagent packs;

e. a pipetting nest having a multiplicity of compartments aligned in at least one horizontal row, each adapted for retaining one of respective reagent packs for simultaneous pipetting;

f. at least one vertical transport route between two adjacent and spaced apart columns of said compartments for allowing the vertical movement of said gripper mechanism, and at least one horizontal transport route between two adjacent and spaced apart rows of said compartments for allowing the horizontal movement of said gripper mechanism carried by said gantry, for transporting said reagent packs between said storage nest and said pipetting nest;

g. means for positioning and positively retaining said reagent pack by said gripper mechanism, including holes with tapered conical opening on said outer sides of said reagent pack and complementary conical pins on said inner sides of said gripping jaws, for causing said reagent pack to be slightly lifted up when engaged by said gripping jaws and moved in or out of said storage compartment; and

h. means for maintaining precise pipetting position of said reagent pack, including spring-loaded v-shaped members located in said pipetting compartment, for limiting the movement of said reagent pack during pipetting.

Amended claim 1 specifically requires "(b) a gantry mounted on a rack structure and movable horizontally for carrying a gripper mechanism which is vertically movable on the gantry and horizontally moveable with the gantry, the gripper mechanism having a pair of generally oppositely disposed and synchronically movable gripping jaws each having an inner side for engagement with said outer sides of said reagent pack;" "(d) a storage nest having a multiplicity of compartments aligned in vertical columns and horizontal rows, each adapted for

storing one of the respective reagent packs;" "(e) a pipetting nest having a multiplicity of compartments aligned in at least one horizontal row, each adapted for retaining one of respective reagent packs for simultaneous pipetting;" and "(h) means for maintaining precise pipetting position of said reagent pack, including spring-loaded v-shaped members located in said pipetting compartment, for limiting the movement of said reagent pack during pipetting." The device of the present invention allows a random access of the gripper to the reagent packs.

The '750 patent either alone or in combination with the '298 patent does not teach or suggest the above-discussed elements. In addition, the '214 patent could not have been combined with the '750 patent to arrive at a device with the above elements.

The '750 patent does not teach any of the above claimed elements. As stated by the Examiner the '750 patent "fails to recite a reagent storage nest having a multiplicity of compartments in both vertical and horizontal rows." In addition, the Examiner stated that the '750 patent does "not specifically recite a pipetting nest having a spring-loaded v-shaped members for limiting the movement of the reagent pack during pipetting."

The Examiner relies on the '750 patent for teaching a gantry mounted on a rack structure and movable horizontally for carrying a gripper mechanism which is vertically movable on the gantry and horizontally moveable with the gantry, the gripper mechanism having a pair of generally oppositely disposed and synchronically movable gripping jaws each having an inner side for engagement with said outer sides of said reagent pack. To the contrary, however, the '750 patent fails to teach the claimed gripper mechanism.

The '750 patent states "For non-round containers or round containers larger than 20 mm in diameter, a gripping block or other gripping means, preferably including a flange, must be provided on the containers for robotic arm 100 to lift them. One particular gripping block 560 may be provided on the top of a reagent package, which contains reagents used by instrument 10" (column 12, lines 36-42). In view of this teaching, one skilled in the art would at least be discouraged to use

for a non-round container a gripper mechanism having a pair of generally oppositely disposed and synchronically movable gripping jaws each having an inner side for engagement with said outer sides of said reagent pack. Instead, a gripping block would have been provided for the gripper jaws to lift.

The claimed invention requires the use of a reagent pack that may be qualified as a non-round container in accordance with the '750 patent. Therefore, in view of the teaching of the '750 patent, one skilled in the art would not have arrived at the gripper mechanism of the present invention. Amended claim 1 requires a multiplicity of reagent packs, each having an elongated body with at least one well, the elongated body having thickness that is sufficient to accommodate said well and a slim profile with a middle portion, a front portion with a pointed front end, and a rear portion with a rounded rear end having two generally opposite outer sides wherein the middle portion is wider than front end and rear portions. The reagent pack in the current invention is therefore a non-rounded container. According to the '750 patent, this would necessitate the use of a gripping block or other gripping means attached to the container. Therefore, in view of the teaching of the '750 patent, one skilled in the art would not have been motivated to use a gripper mechanism having a pair of generally oppositely disposed and synchronically movable gripping jaws each having an inner side for engagement with said outer sides of said reagent pack. Here the gripping jaws engage the outer sides of the reagent pack and no gripping block or other gripping means is used.

The '214 patent can not remedy the defect of the '750 patent and is not relied on by the Examiner for such. The '214 patent has no teaching of the claimed gripping mechanism. Instead, the Examiner cites the '214 patent for its teaching of "a 3-dimensional storage and retrieval module for storing and retrieving very large numbers of different reagents in containers" (column 6, lines 25-28). In response, the Applicant respectfully submits that the '214 patent could not have been combined with the '750 patent, because the combination of the prior art would change the principle of operation of the prior art being modified.

The '214 patent states "A chemical well retriever 130 stores and retrieves addressable wells in plates from racks in hotels and is disposed on horizontal and vertical track 140 that can position the retriever. A chemical well retriever arm 150 that engages plates from the bottom, to place plates on and remove plates from, a rack" (column 11, lines 60-66). More importantly, the '214 patent states, "Preferably, the chemical well retriever will not use a robotic hand that grips the plate from the plate's side. Instead it preferably retrieves a plate from the bottom, for example with a platen" (column 10, lines 46-49). This is in direct opposition to the current invention where a gripper mechanism having a pair of generally oppositely disposed and synchronically movable gripping jaws is used. It is well established that when the combination of the prior art would change the principle of operation of the prior art being modified, then the teachings of the references are not sufficient to render the claims *prima facie* obvious. *In re Ratti,* 270 F.2d 810, 123 USPQ 349 (CCPA 1959).

Similarly, the '298 patent can not remedy the defects of the '750 patent, and is not relied on by the Examiner for such. Instead, the Examiner stated that the '298 patent "does teach a pipetting nest having spring-loaded v-shaped members 73, 73a for limiting the movement of the container during pipetting (column 9, lines 35-54, Fig. 2)." In addition, the Examiner stated "such a spring-loaded gripping means provides stability while the container is accessed by pipette 50 (column 10, lines 44-45)." However, the Applicant submits that the '298 patent neither teaches or suggests a pipetting nest having a multiplicity of compartments aligned in at least one horizontal row, each adapted for retaining one of respective reagent packs for simultaneous pipetting and a means for maintaining precise pipetting position of said reagent pack, including spring-loaded v-shaped members located in said pipetting compartment, for limiting the movement of said reagent pack during pipetting. The pipetting nest referred to by the Examiner in column 9, lines 35-54, Fig. 2, consists of only one v-shaped member, while the present invention as claimed requires a pipetting nest having a multiplicity of compartments aligned in at least one horizontal row, each adapted for retaining one of respective reagent

packs for simultaneous pipetting and means for maintaining precise pipetting position of said reagent pack, including spring-loaded v-shaped members located in said pipetting compartment, for limiting the movement of said reagent pack during pipetting. The multiple compartments and spring-loaded v-shaped members provided allow the performance of simultaneous pipetting, which advantage is not achieved or taught by the '298 patent.

In light of the foregoing, Applicant respectfully submits that the '750 patent either alone or in combination with the '298 patent and the '214 patent could not have made the amended claim 1 obvious. Claims 2-6 depend from claim 1 and can not be made obvious by the '750 patent, the '298 patent and the '214 patent for at least the same reasons as claim 1.

Claim 11 specifically requires "a storage nest having a multiplicity of compartments aligned in vertical columns and horizontal rows, each adapted for storing a respective one of said reagent packs;" "a pipetting nest having a multiplicity of compartments aligned in at least one horizontal row, each adapted for retaining a respective one of said reagent packs for simultaneous pipetting;" and a "means for maintaining precise pipetting position of said reagent pack, including spring-loaded members located in said pipetting compartment, for limiting the movement of said reagent pack during pipetting." The '750 patent either alone or in combination with the '298 patent does not teach or suggest any of these requirements. The '214 patent could not have been combined with the '750 patent.

The '750 patent does not teach any of the above claimed elements. As stated by the Examiner the '750 patent "fails to recite a reagent storage nest having a multiplicity of compartments in both vertical and horizontal rows." In addition, the Examiner stated that the '750 patent does "not specifically recite a pipetting nest having a spring-loaded v-shaped members for limiting the movement of the reagent pack during pipetting."

The '214 patent could not remedy the defect of the '750 patent for the same reasons as discussed above.

Similarly, the '298 patent could not remedy the defect of the '750 patent. The Examiner stated that the '298 patent "does teach a pipetting nest having spring-loaded v-shaped members 73, 73a for limiting the movement of the container during pipetting (column 9, lines 35-54, Fig. 2)." In addition, the Examiner stated "such a spring-loaded gripping means provides stability while the container is accessed by pipette 50 (column 10, lines 44-45)." However, the Applicant submits that the '298 patent neither teaches or suggests a pipetting nest having a multiplicity of compartments aligned in at least one horizontal row, each adapted for retaining one of respective reagent packs for simultaneous pipetting and a means for maintaining precise pipetting position of said reagent pack, including spring-loaded members located in said pipetting compartment, for limiting the movement of said reagent pack during pipetting. The pipetting nest referred to by the Examiner in column 9, lines 35-54, Fig. 2, consists of only one v-shaped member, while the present invention as claimed requires a pipetting nest having a multiplicity of compartments aligned in at least one horizontal row, each adapted for retaining one of respective reagent packs for simultaneous pipetting and means for maintaining precise pipetting position of said reagent pack, including spring-loaded members located in said pipetting compartment, for limiting the movement of said reagent pack during pipetting. Thus there is more than one spring-loaded member. This gives an advantage that simultaneous pipetting can be performed.

In light of the foregoing, Applicant respectfully submits that the '750 patent either alone or in combination with the '298 patent and the '214 patent could not make claim 11 obvious. Claims 12 and 13 depend from claim 11 and can not be made obvious by the '750 patent, the '298 patent and the '214 patent for at least the same reasons as claim 11

Claims 9-10 and 14-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over the '750 patent in view of the '298 patent. Applicant respectfully traverses this rejection.

Claim 9, as amended recites:

A transporting and storing system used in conjunction with an immunodiagnostic instrument, comprising:

a. a multiplicity of reagent packs;

b. a gantry movably mounted on a rack structure for carrying a gripper mechanism, the gripper mechanism having gripping jaws for engagement with said reagent pack;

c. a power assembly for actuating the respective movement of said gantry, said gripper mechanism and said gripping jaws;

d. a storage nest having a multiplicity of compartments each adapted for storing a respective one of said reagent packs;

e. a pipetting nest having a multiplicity of compartments each adapted for retaining a respective one of said reagent packs for simultaneous pipetting;

f. at least one transport route for allowing movement of said gripper mechanism carried by said gantry for transporting said reagent packs between said storage nest and said pipetting nest;

g. means for positioning and positively retaining said reagent pack by said gripper mechanism, including complementary features on said reagent pack and said gripping jaws, for causing said reagent pack to be slightly lifted up when engaged by said gripping jaws and moved in or out of said storage compartment; and

h. means for maintaining precise pipetting position of said reagent pack, including spring-loaded members located in said pipetting compartment, for limiting the movement of said reagent pack during pipetting.

Amended claim 9 specifically requires "(e) a pipetting nest having a multiplicity of compartments each adapted for retaining one of respective reagent packs for simultaneous pipetting;" and a "(h) means for maintaining precise pipetting position of said reagent pack, including spring-loaded members located in said pipetting compartment, for limiting the movement of said reagent pack during

pipetting." The '750 patent either alone or in combination with the '298 patent does not teach or suggest any of these requirements.

The '750 patent does not teach any of the above claimed elements. As stated by the Examiner the '750 patent does "not specifically recite a pipetting nest having a spring-loaded v-shaped members for limiting the movement of the reagent pack during pipetting."

The '298 patent could not remedy the defect of the '750 patent for the same reasons as discussed in claim 11.

In light of the foregoing, Applicant respectfully submits that the '750 patent either alone or in combination with the '298 patent could not make claim 11 obvious. Claims 10, 14 and 15 depend from claim 9 and could not be made obvious by the '750 patent and the '298 patent for at least the same reasons as claim 9.

In view of the foregoing, it is respectfully submitted that the application is in condition for allowance. Reexamination and reconsideration of the application, as amended, are requested.

If for any reason the Examiner finds the application other than in condition for allowance, the Examiner is requested to call the undersigned attorney at the Los Angeles, California telephone number (213) 337-6700 to discuss the steps necessary for placing the application in condition for allowance.

If there are any fees due in connection with the filing of this response, please charge the fees to our Deposit Account No. 50-1314.

Respectfully submitted,
HOGAN & HARTSON L.L.P.

Date: December 10, 2002

By: _____
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OIPE JC18 DEC 16 2002 PATENT & TRADEMARK OFFICE

Version with markings to show changes made:

IN THE CLAIMS:

Please replace the text of claims 1 and 9 with the following text:

1. (Amended) A transporting and storing system used in conjunction with an immunodiagnostic instrument, comprising:

a. a multiplicity of reagent packs, each having an elongated body with at least one well, the elongated body having [sufficient] thickness that is sufficient to accommodate said [for] well and a slim profile with a [wide] middle portion, a [narrow] front portion with a pointed front end, and a [narrow] rear portion with a rounded rear end having two generally opposite outer sides, wherein the middle portion is wider than the front and rear portions;

b. a gantry mounted on a rack structure and movable horizontally for carrying a gripper mechanism which is vertically movable on the gantry and horizontally moveable with the gantry, the gripper mechanism having a pair of generally oppositely disposed and synchronically movable gripping jaws each having an inner side for engagement with said outer sides of said reagent pack;

c. a power assembly for actuating the respective movement of said gantry, said gripper mechanism and said gripping jaws;

d. a storage nest having a multiplicity of compartments aligned in vertical columns and horizontal rows, each adapted for storing one of the respective reagent packs;

e. a pipetting nest having a multiplicity of [compartment] compartments aligned in at least one horizontal row, each adapted for retaining one of respective reagent packs for simultaneous pipetting;

f. at least one vertical transport route between two adjacent and spaced apart columns of said compartments for allowing the vertical movement of said gripper mechanism, and at least one horizontal transport route between two adjacent and spaced apart rows of said compartments for allowing the horizontal movement of said gripper mechanism carried by said gantry, for transporting said reagent packs between said storage nest and said pipetting nest;

g. means for positioning and positively retaining said reagent pack by said gripper mechanism, including holes with tapered conical opening on said outer sides of said reagent pack and complementary conical pins on said inner sides of said gripping jaws, for causing said reagent pack to be slightly lifted up when engaged by said gripping jaws and moved in or out of said storage compartment; and

h. means for maintaining precise pipetting position of said reagent pack, including spring-loaded v-shaped members located in said pipetting

compartment, for limiting the movement of said reagent pack during pipetting.

9. (Amended) A transporting and storing system used in conjunction with an immunodiagnostic instrument, comprising:

a. a multiplicity of reagent packs;

b. a gantry movably mounted on a rack structure for carrying a gripper mechanism, the gripper mechanism having gripping jaws for engagement with said reagent pack;

c. a power assembly for actuating the respective movement of said gantry, said gripper mechanism and said gripping jaws;

d. a storage nest having a multiplicity of compartments each adapted for storing a respective one of said reagent packs;

e. a pipetting nest having a multiplicity of [compartment] <u>compartments</u> each adapted for retaining a respective one of said reagent packs for simultaneous pipetting;

f. at least one transport route for allowing movement of said gripper mechanism carried by said gantry for transporting said reagent packs between said storage nest and said pipetting nest;

g. means for positioning and positively retaining said reagent pack by said gripper mechanism, including complementary features on said reagent pack and said gripping jaws, for causing said reagent pack to be slightly lifted up when engaged by said gripping jaws and moved in or out of said storage compartment; and

h. means for maintaining precise pipetting position of said reagent pack, including spring-loaded members located in said pipetting compartment, for limiting the movement of said reagent pack during pipetting.